A rounded view of Faraday

Faraday: The Life
by James Hamilton
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In the introduction to his monumental work on the life of Isaac Newton, *Never at Rest* (Cambridge University Press, 1981), Richard Westfall asserted his desire to avoid a detailed factual essay on newtonian science. He chose instead to make Newton himself, the scientist and the man, the central character in the drama of his unfolding life. Treading this fine line between yet another account of well-known scientific discoveries and providing a portrait of the individual who made such discoveries is a difficult path, which Westfall negotiated with great skill.

Hamilton's life of Michael Faraday is of this genre. It is a portrayal of Faraday from his early days as an enthusiastic, observant young man through to his declining years — a man living actively through the intellectual and industrial explosion of the Victorian age. His friends and associates included not only other scientists, but many of the artists and literati of the day. All the influences of the time and the intellectual developments in Britain and mainland Europe were part and parcel of Faraday's life. The 'drama', as Westfall would have it, unfolds through the medium of his correspondence, laboratory notebooks and writings that were intended only for his own use (which today we might categorize as diaries, although they were far more extensive than that commonplace word suggests).

The strength of this book lies in the carefully constructed characters surrounding Faraday: the not always admirable Humphry Davy and his appalling wife; the young men who were part of Faraday's youthful ventures into science; his supportive but non-intellectual wife; unusual women such as Mary Somerville and Ada Lovelace, with whom Faraday had intellectual and emotional encounters. Faraday himself becomes a more real and sympathetic individual in this book than in some other accounts that concentrate primarily on his science or his unusual religious background as a member of the fundamentalist Sandemanian sect.

Hamilton reiterates and provides support for Faraday's formal devotion to the strict rules of this sect, as described by other writers (notably Geoffrey Cantor), but here Faraday's day-by-day activities reveal another side of him. As a young man on his European tour with Davy, he is described as a "*bon viveur*, enjoying good food and wine"; 35 years later he still enjoyed regular visits to the theatre.

Less satisfying is the presentation of Faraday's prodigious achievements in the areas of analytical chemistry, electricity and magnetism, optics and organic chemistry. To have matched the more detailed and insightful essays on this subject that exist elsewhere in the Faraday literature would have required a much longer book and perhaps greater familiarity with these specific scientific areas. Hamilton's descriptions of experiments and their outcomes are marvellously pictorial and often humorous, relying heavily on Faraday's own notebooks — the reader might almost have been there through the course of numerous explosions and emanations of noxious fumes. But Hamilton, whose earlier work includes a biography of the landscape painter J. M. W. Turner, is less sure-footed when placing Faraday's achievements in a historical perspective.

That said, there are plenty of 'scientific essays', but it is hard to find a sympathetic and intriguing account of the life of a great scientist. If people and their peculiarities interest you less than the science, this is probably not the book for you. But if you enjoy having the great and the good from the distant past brought back to life (warts and all), then this is recommended reading. ■

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***Bon viveur*: Michael Faraday had strict religious beliefs, but also enjoyed good food and wine.**